AVAYA

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Avaya Ethernet Routing Switch 4800 Series

The Avaya Ethernet Routing Switch 4800 Series is a Stackable Chassis system providing high-performance, convergence-ready, secure and resilient Ethernet switching connectivity. It also uniquely delivers virtual fabric services to the network edge/wiring closet environment through its support of Avaya Fabric Connect. Available in 4 model variants supporting 10/100/1000 switching and routing, Power-over-Ethernet/Power-over-Ethernet+ and 1 and 10 Gigabit Ethernet SFP+ uplink options, the Ethernet Routing Switch 4800 Series is ideally suited for your next-generation network edge deployments.

Highlights Of The Ethernet Routing Switch 4800 Series

- **Always-on** – Best in class end-to-end resiliency solution, hot-swappable unit replacement within a Stack Chassis and integrated power redundancy.
- **Convergence-ready** – Support for PoE and PoE+, optimized for high-definition video surveillance, true plug and play capabilities for IP Phone deployments, advanced QoS capabilities.
- **Energy efficient** – On average 36% more energy efficient than competitive solutions,* energy saver functionality further reduces power consumption for both Switch and IP Phone without losing telephony connectivity.
- **Powerful** – Wire-speed performance, true pay-as-you-grow Stackable Chassis capabilities, delivering up to 400 ports and 384 Gbps of virtual backplane throughput.
- **Secure** – Standards-based 802.1x with integration with Avaya's Identity Engines portfolio for centralized, policy-based authenticated network access.
- **Flexible** – Mix-and-match best-in-class stacking capabilities with support for PoE/PoE+ and optional 1GbE / 10GbE SFP+ uplinks.
- **Fabric-ready** – Support for Avaya Fabric Connect that extends virtual fabric services from the data center all the way to the wiring closet.

The Ethernet Routing Switch 4800 Series provide high bandwidth, resilient Stackable Chassis capabilities, high performance Layer 2 switching and Layer 3 routing, advanced convergence features and a full suite of security, QoS and management capabilities. The ERS 4800 hardware is based on a next-generation ASIC technology that combines wire-speed performance and non-blocking throughput with sophisticated QoS capabilities to support even the most demanding suite of applications.

Positioned for customers who are looking for Gigabit Ethernet to the desktop, PoE

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and PoE+, SFP+ connectivity and field replaceable redundant AC power supplies, the ERS 4800 provides a flexible high-performance platform to meet the demands of the converged edge. The integrated field replaceable AC power supplies further save cost and rack space.

Through support for PoE and PoE+ customers have the ability to support any mix of end devices. Although the vast majority of IP-based end points do not require the increased power that PoE+ delivers, its support provides piece of mind that as new devices are brought onto the network they can be supported regardless of the power requirements.

Integrated SFP+ ports deliver flexibility in terms of uplink speeds – allowing either 1 Gigabit or 10 Gigabit SFP+ devices to be installed. Customers can start with 1 Gig and then migrate to 10 Gigabit uplinks, as required.

Support for Avaya's Fabric Connect services extends virtualized fabric services all the way from the data center to the campus edge and/or wiring closet. It allows enterprises to deploy new services with far greater ease and agility by eliminating complex hop-by-hop provisioning. Fabric Connect is available on all ERS 4800 platforms as part of each ERS 4800 base license at no additional charge.

To ensure full interoperability across the complete ERS 4000 portfolio, the rear-mounted Stackable Chassis interfaces used on the ERS 4800 are consistent with those used on the other ERS 4000 models. Each ERS 4000 Stackable Chassis delivers up to 384 Gbps when eight units are combined.

Requirement	ERS 4500 Models	ERS 4500 PoE+ Models	ERS 4800 Models
Fast Ethernet to the desktop	Yes	Yes	Yes
Gigabit Ethernet to the desktop	Yes	No	Yes
IEEE 802.3 af PoE	Yes	Yes	Yes
IEEE 802.3 at PoE+	No	Yes	Yes
10 Gig Uplink sockets	XFP	No	SFP+
Redundant power	Yes - available through external RPS 15)	Yes – internal field-replaceable PSUs	Yes – internal field-replaceable PSUs
Avaya Fabric Connect support	No	No	Yes

With 17 different models, the ERS 4000 Series offers a wide range of capabilities that meet a diverse range of edge requirements.

Summary

The ERS 4800 Series is a future-ready solution well suited for the next-generation wiring closet. Along with other Avaya products, the Ethernet Routing Switch 4800 Series can increase profitability and productivity, streamline business operations, lower costs and help your business gain a competitive edge.

Avaya Ethernet Routing Switch 4800 Series	
ERS 4826GTS	24 10/100/1000BASE-T ports, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4826GTS-PWR+	24 10/100/1000BASE-T ports supporting 802.3at PoE+, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4850GTS	48 10/100/1000BASE-T ports, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4850GTS-PWR+	48 10/100/1000BASE-T ports supporting 802.3at PoE+, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports

Product Specifications

ERS 4826GTS

Switch Details	24 10/100/1000 Gigabit Ethernet ports 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 1 GB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 x 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.05 Kg
Power and Thermal	Supplied with 1 x 300 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy
Maximum PoE power	75 watts Thermal Rating 256 BTU/hr

ERS 4826GTS-PWR+

Switch Details	24 10/100/1000 Gigabit Ethernet ports 24 ports support both IEEE 802.3af POE and IEEE 802.3at POE+ 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 1 GB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 x 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.50 Kg
Power and Thermal	Supplied with 1 x 1000 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy or additional PoE Maximum Power 88 watts (without PoE Load) Thermal Rating 300 BTU/hr
Maximum PoE power	855 watts when operating on one 1000w power supply 1855 watts when operating on two 1000w power supply

ERS 4850GTS

Switch Details	48 10/100/1000 Gigabit Ethernet ports 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 1 GB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.48 Kg
Power and Thermal	Supplied with 1 x 300 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy Maximum Power 95 watts Thermal Rating 323 BTU/hr

ERS 4850GTS-PWR+

Switch Details	48 10/100/1000 Gigabit Ethernet ports 48ports support both IEEE 802.3af POE and IEEE 802.3at POE+ 2 shared SFP ports Plus 2 1/10Gigabit SFP+ ports Plus 2 rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput Ships with 1 46cm HiStack cable System CPU operates at 533 MHz Switch is configured with 1GB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.98 Kg
Power and Thermal	Supplied with 1 x 1000 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy or additional PoE Maximum Power 112 watts (without PoE Load) Thermal Rating 383 BTU/hr
Maximum PoE power	855 watts when operating on one 1000w power supply 1855 watts when operating on two 1000w power supply

General Performance

- Switch Fabric performance: 128Gbps to 184Gbps
- Frame forwarding rate: 66 to 102Mpps
- Stack Throughput: 384Gbps
- Latency (64 byte packet): 3.5 microseconds
- Jitter (64 byte packet): 0.84 microseconds
- Frame length: 64 to 1518 Bytes (802.1Q Untagged), 64 to 1522 bytes (802.1Q Tagged)
- Jumbo Frame support: up to 9,000 Bytes (802.1Q Tagged)
- Multi-Link/LAG Trunks: up to 32 Groups, with 8 Links per Group
- VLANs: up to 1,024 Port/Protocol/802.1Q-based
- Multiple Spanning Tree Groups: 8
- MAC Address: up to 8k
- DHCP Snooping: up to 1,024 table entries
- 802.1X Clients: up to 768
- LLDP Neighbors: up to 800
- ARP Entries: up to 1,792
- IP Interfaces: up to 64
- IPv4 Routes: up to 512
- OSPF Instances: up to 4
- OSPF Adjacencies: up to 16
- ECMP Paths: up to 4
- VRRP Instances: up to 256
- IPFIX Sampled Flows: up to 100,000
- Auto-MDIX

Pluggable Interfaces

- 1000BASE-T SFP up to 100m over CAT5E or better UTP Cable (RJ-45)
- 1000BASE-SX SFP up to 550m reach on MMF (Duplex LC)
- 1000-BASE-LX SFP up to 550m reach on MMF, and up to 10 km on SMF (Duplex LC)
- 1000BASE-XD CDWM SFP up to 40 km reach on SMF (Duplex LC)
- 1000BASE-ZX CDWM SFP up to 70 km reach on SMF (Duplex LC)
- 1000BASE-EX SFP up to 120 km reach on SMF (Duplex LC)
- 1000BASE-BX SFP up to 10 and 40 km reach variants on SMF (LC)
- 100BASE-FX SFP up to 2km reach over MMF (Duplex LC)
- Ethernet-over-T1 SFP up to 2,874m reach over 22AWG Cable (RJ-48C)
- 10GBASE-SR SFP+ up to 300m reach over MMF (Duplex LC)
- 10GBASE-LRM SFP+ up to 220m over FDDI-grade MMF (Duplex LC)
- 10GBASE-LR SFP+ up to 10km reach over SMF (Duplex LC)
- 10GBASE-ER SFP+ up to 40km reach over SMF (Duplex LC)
- 10GBASE-X SFP+ Direct Attach Cables, in 3, 5, & 10m lengths

ERS 4800 Standards Compatibility

- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.1t 802.1D Maintenance
- IEEE 802.1p Prioritizing
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1X Ethernet Authentication Protocol
- IEEE 802.1AB Link Layer Discovery Protocol
- IEEE 802.1AX Link Aggregation Control Protocol (LACP)
- IEEE 802.1ag Connectivity and Fault Management
- IEEE 802.1aq Shortest Path Bridging MAC
- IEEE 802.3 Ethernet
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet Plus
- IEEE 802.3ad / 802.1AX Link Aggregation Control Protocol - LACP
- IEEE 802.3ab Gigabit Ethernet over Copper
- IEEE 802.3ae 10Gbps Ethernet
- IEEE 802.3ak 10GBase-CX4
- IEEE 802.3i 10Base-T
- IEEE 802.3u Fast Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.3z Gigabit Ethernet
- RFC 768 UDP
- RFC 783 TFTP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet
- RFC 894 IP over Ethernet
- RFC 903 Reverse ARP
- RFC 950 / RFC 791 IP
- RFC 951 BootP
- RFC 958 NTP
- RFC 1058 RIPv1
- RFC 1112 IGMPv1
- RFC 1122 Requirements for Internet hosts
- RFC 1155 SMI
- RFC 1156 MIB for management of TCP/IP
- RFC 1157 SNMP
- RFC 1212 Concise MIB definitions
- RFC 1213 MIB-II
- RFC 1215 SNMP Traps Definition
- RFC 1340 Assigned Numbers
- RFC 1350 TFTP
- RFC 1354 IP Forwarding Table MIB
- RFC 1398 Ethernet MIB
- RFC 1442 SMI for SNMPv2
- RFC 1450 MIB for SNMPv2
- RFC 1493 Bridge MIB
- RFC 1519 Classless Inter-Domain Routing (CIDR)
- RFC 1591 DNS Client
- RFC 1650 Definitions of Managed Objects for Ethernet-like Interfaces
- RFC 1724 / RFC 1389 RIPv2 MIB extensions

ERS 4800 Standards Compatibility (cont.)	
RFC 1769 / RFC 1361 SNTP	RFC 3418 / RFC 1907 SNMPv2 MIB
RFC 1886 DNS extensions to support IPv6	RFC 3484 Default Address Selection for IPv6
RFC 1908 Coexistence between SNMPv1 & v2	RFC 3513 IPv6 Addressing Architecture
RFC 1945 HTTP v1.0	RFC 3569 Overview of Source Specific Multicast (SSM)
RFC 1981 Path MTU Discovery for IPv6	RFC 3579 RADIUS support for EAP
RFC 2011 SNMP v2 MIB for IP	RFC 3584 / RFC 2576 Co-existence of SNMP v1/v2/v3
RFC 2012 SNMP v2 MIB for TDP	RFC 3587 IPv6 Global Unicast Format
RFC 2013 SNMP v2 MIB for UDP	RFC 3596 DNS extensions to support IPv6
RFC 2096 IP Forwarding Table MIB	RFC 3621 Power over Ethernet MIB
RFC 2131 / RFC 1541 Dynamic Host Configuration Protocol (DHCP)	RFC 3635 Definitions of Managed Objects for the Ethernet-like Interface Types
RFC 2138 RADIUS Authentication	RFC 3768 / RFC 2338 VRRP
RFC 2139 RADIUS Accounting	RFC 3810 MLDv2 for IPv6
RFC 2236 IGMPv2	RFC 3826 AES for the SNMP User-based Security Model
RFC 2328 / RFC 2178 / RFC 1583 OSPFv2	RFC 3917 Requirements for IPFIX
RFC 2453 RIPv2	RFC 3954 Netflow Services Export v9
RFC 2454 IPv6 UDP MIB	RFC 3993 DHCP Subscriber-ID sub-option
RFC 2460 IPv6 Specification	RFC 4007 Scoped Address Architecture
RFC 2461 IPv6 Neighbor Discovery	RFC 4022 / RFC 2452 TCP MIB
RFC 2464 Transmission of IPv6 packets over Ethernet	RFC 4113 UDP MIB
RFC 2474 Differentiated Services (DiffServ)	RFC 4133 / RFC 2737 / RFC 2037 Entity MIB
RFC 2541 Secure Shell protocol architecture	RFC 4193 Unique Local IPv6 Unicast Addresses
RFC 2597 Assured Forwarding PHB Group	RFC 4213 Transition Mechanisms for IPv6 Hosts & Routers
RFC 2598 Expedited Forwarding PHB Group	RFC 4250 SSH Protocol Assigned Numbers
RFC 2616 / RFC 2068 HTTP 1.1	RFC 4251 SSH Protocol Architecture
RFC 2660 HTTPS - Secure Web	RFC 4252 SSH Authentication Protocol
RFC 2665 / RFC 1643 Ethernet MIB	RFC 4253 SSH Transport Layer Protocol
RFC 2674 Q-BRIDGE-MIB	RFC 4254 SSH Connection Protocol
RFC 2715 Interoperability Rules for Multicast Routing Protocols	RFC 4291 IPv6 Addressing Architecture
RFC 2787 Definitions of Managed Objects for VRRP	RFC 4293 IPv6 MIB
RFC 2819 / RFC 1757 / RFC 1271 RMON	RFC 4344 SSH Transport layer Encryption Modes
RFC 2851 Textual Conventions for Internet network addresses	RFC 4345 Improved Arcfour Modes for SSH
RFC 2863 / RFC 2233 / RFC 1573 Interfaces Group MIB	RFC 4432 SSHv2 RSA
RFC 2865 RADIUS	RFC 4443 / RFC 2463 ICMPv6 for IPv6
RFC 2866 / RFC 2138 RADIUS Accounting	RFC 4541 Considerations for IGMP and MLD snooping switches
RFC 2869 RADIUS Extensions - Interim updates	RFC 4604 / RFC 3376 IGMPv3
RFC 2933 IGMP MIB	RFC 4673 RADIUS Dynamic Authorization Server MIB
RFC 3058 RADIUS Authentication	RFC 4675 RADIUS Attributes for VLAN and Priority Support
RFC 3140 / RFC 2836 Per-Hop Behavior Identification codes	RFC 4716 SSH Public Key File Format
RFC 3162 IPv6 RADIUS Client	RFC 4750 / RFC 1850 / RFC 1253 OSPF v2 MIB
RFC 3246 Expedited Forwarding Per-Hop Behavior	RFC 4789 SNMP over IEEE 802 Networks
RFC 3260 / RFC 2475 Architecture for Differentiated Services	RFC 4861 Neighbor Discovery for IPv6
RFC 3289 DiffServ MIBs	RFC 4862 / RFC 2462 IPv6 Stateless Address Auto-Configuration
RFC 3410 / RFC 2570 SNMPv3	RFC 5010 / RFC 3046 DHCP Relay Agent Information Option 82
RFC 3411 / RFC 2571 SNMP Frameworks	RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
RFC 3412 / RFC 2572 SNMP Message Processing	RFC 5101 Specification of the IP Flow Information Export (IPFIX) Protocol for Exchange of IP Traffic
RFC 3413 / RFC 2573 SNMPv3 Applications	RFC 5176 / RFC 3576 Dynamic Authorization Extensions to RADIUS
RFC 3414 / RFC 2574 SNMPv3 USM	RFC 5186 IGMPv3/MLDv2 and Multicast Routing Interaction
RFC 3415 / RFC 2575 SNMPv3 VACM	RFC 5905 / RFC 4330 / RFC 1305 NTPv4
RFC 3416 / RFC 1905 SNMP	RFC 6329 IS-IS Extensions Supporting Shortest Path Bridging
RFC 3417 / RFC 1906 SNMP Transport Mappings	

Power Specifications

up to 8.5A @ 100-120VAC	up to 4.3A @ 200-240VAC

Environmental Specifications

Operating temperature: 0°C to 50°C (32°F to 122°F) Storage temperature: -40°C to 85°C (-13°F to 158°F) Operating humidity: 0 to 95% maximum relative humidity, non-condensing Storage humidity: 10 to 90% maximum relative humidity, non-condensing	Operating altitude: 0 to 3,048m (0 to 10,000ft) maximum Storage altitude: 0 to 12,192m (0 to 40,000ft) maximum Acoustic Noise: less than 50dbA at 35°C less than 57dbA at 50°C

Safety Agency Approvals

Global basis for certification: IEC 60950 current edition with all CB member deviations

CB Scheme Certification with Member Deviations

EN60950 Europe Safety (CE)

UL60950 United States of America Safety

CSA22.2, #60950 Canada Safety

NOM Mexico Safety

S-mark Argentine Safety

Anatel Brazilian Safety

Electromagnetic Emissions & Immunity

CISPR22 International EMC Emissions CIRPR24 International EMC Immunity EN55022:2006 European EMC Emissions (CE) EN55024 European EMC Immunity (CE) EN61000 Additional European EMC Specifications (CE) FCC Part 15 US EMC Emissions	ICES-003 Canadian EMC Emissions VCCI Japan EMC Emissions AN/NZS 3548 Australia/New Zealand EMC Emissions CNS13438 Taiwan EMC Emissions MIC Korean EMC Certification Anatel Brazilian EMC Certification

MTBF Values

214,542 to 311,104 hours (24.49 to 35.31 years)

Warranty

Lifetime Next Business Day advanced hardware replacement Lifetime Basic Technical Support 90-Day Advanced Technical Support	Optional Software Release Service also available: GW5300ASG / GW6300ASG

Country of Origin

China (PRC)

About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, networking and related services to companies of all sizes around the world. For more information please visit **www.avaya.com.**

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